

REMARKS/ARGUMENTS

Claims 1, 5-10, 14-18, and new claims 39-40 are pending in the application.

Reconsideration is respectfully requested. Applicants submit that the pending claims are patentable over the art of record and allowance is respectfully requested of the pending claims.

In this Amendment, Applicants have amended claims 1 and 10. Applicants are not conceding that the subject matter encompassed by claims 1, 5-10, 14-18, and 39-40, prior to this Amendment is not patentable over the art cited by the Examiner. Claims 1 and 10 were amended in this Amendment solely to facilitate expeditious prosecution of the pending claims. Applicants respectfully reserve the right to pursue claims, including the subject matter encompassed by claims 1, 5-10, 14-18, and 39-40, as presented prior to this Amendment and additional claims, in one or more continuing applications.

Claims 1, 9, 10, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agarwal et al. (U.S. Patent No. 6,351,742) in view of Chow et al. (U.S. Patent No. 5,875,334) in view of Kaluskar et al. (U.S. Patent No. 6,985,904) and further in view of Hayes (U.S. Pub. No. 2002/0129035). Applicants respectfully traverse.

Amended claim 1 describes at bind time, calculating and storing optimization information in a bind-in structure (e.g., Specification, paragraph 60). Amended claim 1 describes, when executing a statement for one of a multiple row insert and a multiple row fetch, when performing bind-in of host variables: for column array processing for local processing, comparing data in an application structure received with the statement with optimization information in the bind-in structure, wherein the optimization information includes at least one of data type, length, Coded Character Set Identifier, an array size, an indication of whether conversions are required, and an indication of whether the required conversions are valid, wherein the application structure describes data, wherein the application structure is used to store data to be retrieved for a fetch statement, and wherein the application structure is used to provide data to be inserted for an insert statement; and for stream array processing for distributed processing, comparing the optimization information in the bind-in structure with information in a stream flow that includes metadata that is sent with the data (e.g., Specification, paragraphs 23 and 40). Amended claim 1

describes, when there is a match, executing the statement with the optimization information to perform one of fetching data from the data store and inserting data into the data store; and, when there is not a match, regenerating optimization information and executing the statement with the regenerated optimization information to perform one of fetching data from the data store and inserting data into the data store.

The Agarwal patent describes a list of arguments can be passed to the optimizer, a description of the arguments in the database can be passed to the optimizer, and the optimizer then estimates the cost for each execution plan (Col 3, line 66 – Col. 4, line 39). The estimated costs may be generated by use of the previously calculated selectivity value, and the optimizer then selects for execution the execution plan having the lowest relative cost (Col. 4, lines 39-42). At Col. 8, lines 1-22, the Agarwal patent describes a database statement that queries for all entries from Table3 in which the values of the column Table3.col equal $\arctan(:x)$. The Agarwal patent here *compares values of columns in a table with $\arctan(:x)$* . Applicants respectfully submit that this does not teach or suggest *comparing data in an application structure received with the statement with optimization information in the bind-in structure or comparing the optimization information in the bind-in structure with information in a stream flow that includes metadata that is sent with the data*. In the Office Action (page 5), the Examiner states that the method of Agarwal is comparing data in an application structure received with the statement (i.e., a possible value of x which is in a range of values; particularly note that said value is bind-in variable) with optimization information (collected statistics for the Table3.col column). However, the Examiner contradicts this on page 10 by stating that Agarwal does not explicitly teach the limitations of "wherein the application structure describes data, wherein the application structure is used to store data to be retrieved for a fetch statement, and wherein the application structure is used to provide data to be inserted for an insert statement". Thus, neither the table nor the bind-in variable x of the Agarwal patent teach or suggest the claimed application structure, wherein the application structure describes data, wherein the application structure is used to store data to be retrieved for a fetch statement, and wherein the application structure is used to provide data to be inserted for an insert statement and the Agarwal patent does not teach or suggest the claimed comparison. Moreover, the Examiner cites the Chow patent as teaching that the application structure describes data, wherein the application structure is used to store

data to be retrieved for a fetch statement, and wherein the application structure is used to provide data to be inserted for an insert statement.

The law is well settled that a reference will not support a rejection based upon obviousness where the proposed modification to the reference contravenes the principle of operation of the device of the reference:

If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)

The Examiner appears to be impermissibly modifying the Agarwal patent by adding the application structure of the Chow patent, which contravenes the principle of operation of the Agarwal patent.

Moreover, Applicants also submit that the collected statistics for the Table3.col column do not teach or suggest the claimed optimization information in the bind-in structure.

As to, when there is a match between the data in the application structure and data in the optimization information in the bind-in structure, executing the statement with the optimization information, the Examiner cites the Agarwal patent at Col. 4, lines 41-44, which describes that the optimizer then selects for execution the execution plan having the lowest relative cost. First, this execution plan is not selected based on whether there is a match between the data in the application structure and data in the optimization information in the bind-in structure. Second, Applicants respectfully submit that selection of an execution plan does not teach or suggest, when there is a match between the data in the application structure and data in the optimization information in the bind-in structure, executing the statement with the optimization information to perform one of fetching data from the data store and inserting data into the data store, and, when there is not a match between the data in the application structure and the optimization information, regenerating optimization information and executing the statement with the regenerated optimization information to perform one of fetching data from the data store and inserting data into the data store.

The Kaluskar patent describes at Col. 3, lines 57-64, that if a match is not found, then compilation proceeds. Continuing with compilation does not teach or suggest, when there is not a match, regenerating optimization information and executing the statement with the regenerated optimization information to perform one of fetching data from the data store and inserting data into the data store.

The Hayes patent application does not cure the defects of the Agarwal, Chow, and Kaluskar patents.

In addition, the cited patents, either alone or in any combination, do not teach or suggest when executing a statement for one of a multiple row insert and a multiple row fetch, when performing bind-in of host variables: for column array processing for local processing, comparing data in an application structure received with the statement with optimization information in the bind-in structure, wherein the optimization information includes at least one of data type, length, Coded Character Set Identifier, an array size, an indication of whether conversions are required, and an indication of whether the required conversions are valid, wherein the application structure describes data, wherein the application structure is used to store data to be retrieved for a fetch statement, and wherein the application structure is used to provide data to be inserted for an insert statement; and for stream array processing for distributed processing, comparing the optimization information in the bind-in structure with information in a stream flow that includes metadata that is sent with the data.

Thus, amended claim 1 is not taught or suggested by the Agarwal patent, the Chow patent, the Kaluskar patent or the Hayes patent application, either alone or in combination.

Claim 10 describes bind-out, rather than bind-in (as described in claim 1). Applicants respectfully submit that claim 10 is not taught or suggested by the by the Agarwal patent, the Chow patent, the Kaluskar patent or the Hayes patent application, either alone or in combination, for at least the same reasons as were discussed with respect to claim 1.

Dependent claims 9 and 18 and new claims 39-40 each incorporate the language of independent claims 1 or 10 and add additional novel elements. Therefore, dependent claims 9, 18, and 39-40 are not taught or suggested by the cited references, either alone or in any combination, for at least the same reasons as were discussed with respect to claims 1, and 10.

Claims 5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agarwal et al. in view of Chow and further in view of Kaluskar and further in view of Hayes and further in view of Desai et al. (U.S. Patent No. 6567816). Applicants respectfully traverse. Additionally, Applicants respectfully submit that the rejection is moot in light of the new amendments.

The Desai patent does not cure the defects of the Agarwal patent, the Chow patent, the Kaluskar patent, the Hayes patent. For example, the Desai patent does not teach or suggest, the subject matter of amended claims 1 and 10. Therefore, amended claims 1 and 10 are not taught or suggested by the Agarwal patent, the Chow patent, the Kaluskar patent, the Hayes patent application or the Desai patent, either alone or in combination.

Dependent claims 5 and 14 each incorporate the language of independent claims 1 or 10 and add additional novel elements. Thus, claims 5 and 14 are not taught or suggested by the Agarwal patent, the Chow patent, the Kaluskar patent, the Hayes patent or Desai patent, either alone or in combination, for at least the same reasons as were discussed with respect to claims 1 and 10.

Claims 6-8 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agarwal et al. in view of Chow and further in view of Kaluskar and further in view of Hayes and further in view of Jordan II et al. (U.S. Patent No. 5,875,442). Applicants respectfully traverse. Additionally, Applicants respectfully submit that the rejection is moot in light of the new amendments.

The Jordan II patent does not cure the defects of the Agarwal patent, the Chow patent, the Kaluskar patent, the Hayes patent. For example, the Jordan II patent does not teach or suggest the subject matter of amended claims 1 and 10. Therefore, amended claims 1 and 10 are not taught or suggested by the Agarwal patent, the Chow patent, the Kaluskar patent, the Hayes patent or the Jordan II patent, either alone or in combination.

Dependent claims 6-8 and 15-17 incorporate the language of independent claims 1, 10, 19, and 28 and add additional novel elements. Thus, claims 6-8 and 15-17 are not taught or suggested by the Agarwal patent, the Chow patent, the Kaluskar patent, the Hayes patent or the Jordan II patent, either alone or in combination, for at least the same reasons as were discussed with respect to claims 1 and 10.

Conclusion

For all the above reasons, Applicants submit that the pending claims are patentable over the art of record. Applicants have not added any claims. Nonetheless, should any additional fees be required, please charge Deposit Account No. 09-0460.

The attorney of record invites the Examiner to contact her at (310) 553-7973 if the Examiner believes such contact would advance the prosecution of the case.

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